Volume and Vision: Fluid Frames of Thinking Ocean Space

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When writing of the sea, anthropologist Claude Lévi-Strauss describes a horizontal, planar surface of flatness that spreads over the earth with uniformity and repetition. This is an empty surface without character or depth, a 360-degree level overlay that covers the planet in a liquid film. The sea, for Lévi-Strauss, is a space of absence, unique in that it lacks land-like features:

> I feel baulked by all this water which has stolen half my universe. […] The diversity customary on land seems to me to be simply destroyed by the sea, which offers vast spaces and additional shades of colouring for our contemplation, but at the cost of an oppressive monotony and a flatness in which no hidden valley holds in store surprises to nourish my imagination.
>
> […] The sea offers me a diluted landscape.[1]

Notably, Lévi-Strauss calls it a landscape. He fails to even consider an alternate perspective in which the ocean is appreciated as a moving, meaning-filled, three-dimensional *seascape*; a space filled with material molecules, mobile objects, and voyaging subjects.

In reducing the sea to a flat and empty surface, Lévi-Strauss reproduces a long-standing Western conceptualization in which the ocean is defined by its failings, most notably its failure to facilitate the "rooting" practices of placemaking, economic and social development, and state territorialization, all of which characterize land. In contrast to the static, empty surface derided by Lévi-Strauss, we join more recent scholars in holding that in the ocean "nothing is static[, n]othing remains the same,"[2] and that "[even] in the strict horizontal of it all, unstable cascades are endlessly trading."[3] These "cascades" encompass not just water but a range of other geophysical states (e.g., ice, vapor), materials (e.g., sand, silt, shells, and countless organisms), and meanings.

This turn toward apprehending the ocean as dynamic, deep, and consisting of multiple, intersecting elements resonates with, but also adds new dimensions to, contemporary efforts at unearthing the "geo" that underpins understandings of geography.[4] The earth is increasingly configured as a geophysical assemblage

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[1] Claude Lévi-Strauss, *Tristes Tropiques*, trans. John Weightman and Doreen Weightman (London: Jonathan Cape, 1973 [1955]), 338–9.
[2] Anna Ryan, *Where Land Meets Sea: Coastal Exploration of Landscape, Representation and Spatial Experience* (Farnham: Ashgate, 2012), 9.
[3] Michel Serres, *Genesis*, trans. Genevieve James and James Nielson (Ann Arbor: University of Michigan Press), 13.
[4] Stuart Elden, "Earth" (lecture, City-State Lexical-Political Workshop, Tel Aviv, June 2013), http://progressivegeographies.files.wordpress.com/2013/06/earth-citystate-workshop.mp3.

consisting of not just "solid land, but […] water, ice, subsoil, and the submarine,"[5] as well as the air, atmosphere, and stratosphere. This shift is significant. The earth as solid ground has typically rendered it fixed and unchanging. In comparison, the earth as a configuration of multiple materials opens a vision of the world as mobile and emergent, not in a state of being but in one of becoming. From this perspective, the stable metaphysics of Euclidean thought is replaced by an ontology alert to a world of connection, networks, flow, openness, leakiness, and change—a three- (or four-)dimensional world.

While land can be thought of in a similar way (Doreen Massey reminds us that even mountains move[6]), the sea provides a unique space for developing an understanding of fluidity. Its depth, its dynamic recomposition, and its material instability, readily apparent to even the casual observer, all lend to this reading. In short, what we call a "wet ontology" does more than shed light on the complex ways in which the ocean, as a space of depth and churning, simultaneously connects and divides the world in which we live. It also provides us with a way of thinking that destabilizes sedentary and surficial notions of "place" and "being" while revealing a dynamic world of relational becoming.[7]

Bringing Volume to Oceans

Before embracing the ocean as a liberatory "theory machine" that frees our mind to envision a world of flows, let us recall that the ocean is also a "thing in this world."[8] And in its worldliness, the depths of the ocean offer not just dynamism and possibility but also murkiness and occlusion. The dynamic and deep geophysics of the ocean are as likely to confound attempts at describing the present as they are to enhance efforts at envisioning the future.

Consider the case of the *MV Lyubov Orlova,* a former Russian cruise ship that had been embroiled in a political mix-up of unpaid port fees and ambiguous ownership. In 2012, the towline linking the vessel to an American tug snapped in Canadian waters, en route to the Dominican Republic where the vessel was to be scrapped. Fearful that the vessel would collide with oil platforms, Transport Canada (the authority concerned) set about securing the ship. However, rather than return it on its course, the Canadian authorities "confident that prevailing winds and currents would direct the *Lyubov Orlova* into open ocean where it could do no immediate harm,"[9] slipped the towline and let the vessel disappear into the vastness of the sea, never to be seen again. A website called *Where is Orlova?* allows interested parties to follow the story and report sightings, positioning these on a map of the Atlantic Ocean, where the vessel is believed to be drifting.

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[5] Stuart Elden, "Undermining Geopolitics: Sea, Seabed, Ice" (lecture, ArcticNet Conference, Halifax, December 2013), http://progressivegeographies.files.wordpress.com/2013/12/arcticnet-undermining-geopolitics.mp3.

[6] See Doreen Massey, *For Space* (Thousand Oaks, CA: Sage, 2004).

[7] Philip E. Steinberg and Kimberley Peters, "Wet Ontologies, Fluid Spaces: Adding Depth to Volume through Oceanic Thinking," *Environment and Planning D: Society & Space* (forthcoming).

[8] Stefan Helmreich, "Nature/Culture/Seawater," *American Anthropologist* 113, no. 1 (March 2011): 132–44.

[9] Mark Synnott, "Amid Hunt for Malaysian Plane, Ocean Swims with Missing Vessels," *National Geographic*, March 19, 2014, http://news.nationalgeographic.com/news/2014/03/140319-ghost-ship-malaysia-airliner-atlantic-ocean/.

Consider also the March 2014 disappearance of Malaysia Airlines flight MH370. The airliner is believed to have journeyed off course, crashing into the sea with 239 people on board. To date, there is little hard evidence of exactly where it might now be located. The seas—ever motionful spaces of drift currents and flux—move objects constantly. As such, over several months the search area shifted from the region where it is believed that the aircraft most likely entered the water to a region identified by models as the most likely site of wreckage that has been transported by ocean currents. Likewise, after a few weeks searchers assumed that any large pieces of aircraft that had survived the wreck would have become too waterlogged to float on the ocean's surface, and they therefore switched from an aerial, surface-scanning approach using visual methods to a sub-sea, three-dimensional effort where sonar has been the key technology.[10]

These examples draw attention to the *volume* of ocean space, the fluid motion of water, and how these properties complicate sensing and surveillance at sea. For political theorist and geographer Stuart Elden, current geopolitical understandings of territory are limited by the dominance of flat discourses that constitute space as area.[11] The map is the example par excellence. Here, space is rendered as a flat surface that can be governed *across,* through carving territorial boundaries. Such an image fails to account for the world's volume or the ways in which power works *through*, *under*, *and over* space. The representation of the ocean as a formless surface presents an external space of emptiness that contrapuntally reaffirms the territorial state as the fundamental spatial form of modernity. To counter this areal (or surficial) bias in spatial-political theory, Elden contends that verticality is vital. Height and depth open up new dimensions of space that are utilized for political control. Yet, for Elden, adding a vertical element is not enough, for the notion of volume encompasses forces and patterns of "reach, instability, force, resistance, incline, depth and matter alongside the simply vertical."[12] Importantly, especially when one turns to the ocean, this world of volume is also a world of movement. The sea is both planar—horizontal, "shifting" laterally—but likewise, it is vertical, moving upward and downward, rising and subsiding with height and depth. The sea is a space that unites vertical and horizontal motion in co-composition,[13] bringing attention to unrecognized volumes of hydro-space, while, as in the cases of MH370 and the *Lyubov Orlova*, concurrently obscuring the objects within.

Deep, Wide Scopic Regimes

Returning to flight MH370, the depth of the ocean has played a key role in challenging rescue and recovery efforts. The sea's liquid materiality, its composition from loosely held together molecules, enables movement *through* and *under* the water's depths as well as across its surface. Of course some more "solid" materials—sand being one example—can be subject to deeper engagements as feet sink into the soft grains that permit imprinting to a greater degree than other grounded materials, such as granite. This is dependent on the composition of any

[10] BBC News, "Missing Malaysia Plane: What We Know," June 26, 2014, http://www.bbc.co.uk/news/world-asia-26503141.
[11] Stuart Elden, "Secure the Volume: Vertical Geopolitics and the Depth of Power," *Political Geography* 34 (May 2013): 35–51.
[12] Ibid., 45.
[13] See Peter Adey, "Vertical Security in the Megacity," *Theory, Culture & Society* 27, no. 6 (November 2010): 173–87.

given material and the weaving of its particular structure. Yet the structure of water produces a paradox: it has surface, yet concurrently, depth—and both can be experienced.

A second and related paradox is that even as the ocean's depth reveals, it also obscures. In particular, the surface of the sea and its role as a reflector of light hides what is below.[14] The result, as Lévi-Strauss inadvertently disclosed, is that the ocean's depth is lost to the imagination. When MH370 went missing, it submerged *into* the sea, requiring a new search protocol that has combined satellite-based visual technologies with ship- and submersible-based sonic sensors. These two methods seek to reconcile the fact that both light and sound waves are confounded by the material volume and movements of water. In combining these technologies, the searchers were compelled to rethink the "impenetrable striation" that, in modern social thought (e.g., Lévi-Strauss) and legal structures (e.g., the United Nations Convention on the Law of the Sea), separates surface from "the depths of ocean space."[15] Encounters with the sea's voluminous nature, then, lead us to rethink the spaces that constitute the world. Oceans have unique depths, and amid the convergent relations between above-surface, surface, and sub-surface matter is a three-dimensional world that requires new technologies of knowledge.

This is particularly pertinent in view of volume as capacity. Volume refers not just to three-dimensionality but also to the quantity of matter that may be held within a container. Oceans are vast, covering some 71 percent of the planet's surface and containing some 321 million cubic miles of water. This volume too makes surveillance challenging. The *MV Lyubov Orlova* is a 295-foot vessel of 4,251 gross tonnage. It is not a small ship. Yet in relation to the size of the ocean and its vortex of swells, drifts, and currents, the ship is undetectable. Chris Reynolds, an officer with the Irish Coast Guard who was involved with the search when the ship was believed to be in the North Atlantic, noted how the ocean is "still far too immense for satellites to scan without first narrowing the search area."[16] Pim de Rhoodes, a salvage expert who searched for the ship when it first disappeared, stated, "Once it's lost, the ocean is really too big to just go and look for it."[17] If you are unaware of a last position, a lost object at sea is neigh-on impossible to find, even if it is floating on the surface.

Toward a Wet Ontology

Notwithstanding Lévi-Straus's vision, the sea is not merely a planar, flat, monotonous area that offers only a horizontal field of vision. It is a space of flux, flows, and churning. It is deep, volatile, and ever changing. It is a volume that—with the persistence of depth and mobility—produces realms of invisibility that frustrate conventional forms of knowledge.

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[14] See Stacy Alaimo, "Violet-Black," in *Prismatic Ecology: Ecotheory beyond Green*, ed. Jeffrey Cohen (Minneapolis: University of Minnesota Press, 2014), 233–51; Ryan, *Where Land Meets Sea*.

[15] Gastón Gordillo, "The Oceanic Void: The Eternal Becoming of Liquid Space," in *Deleuze and the Schizoanalysis of Spatial Power*, ed. Ronnen Ben-Arie (London: Continuum, forthcoming); see also Philip E. Steinberg, "The Deepwater Horizon, the *Mavi Marmara*, and the Dynamic Zonation of Ocean-Space," *Geographical Journal* 117, no. 1 (March 2011): 12–16.

[16] Paraphrased in Synnott, "Amid Hunt for Malaysian Plane."

[17] Ibid.

This suggests both the limits and the possibilities for a “wet ontology” that takes the ocean as a conceptual foundation for understanding the world. On the one hand, the materiality of the ocean—fluvial, dynamic, opaque, and deep—creates a “moving target” for spatial theory. The ocean can never be stabilized long enough to be described, let alone known as a “place” or a series of “places.” Thinking with the ocean can be maddeningly frustrating in its persistent uncertainty. On the other hand, as a space of perpetual becoming, the ocean is ripe with possibility for thinking through ontologies of emergence, not the emergence of spaces that can ever be seen in their entirety but rather the emergence of spaces that can be sensed through partial encounters.

Thinking with the sea thereby allows us to reimagine and revisualize how we gaze upon, understand, and then engage with space. A wet ontology gives us a material perspective that can be employed to more broadly comprehend the volumes within which we live: a world of fluidities where place is forever in-formation and where power is simultaneously projected on, through, in, and about space.

Conceiving the world via a wet ontology may not help us find *MV Lyubov Orlova* or the remains of MH370. However, it will provide a basis from which to understand what we don’t understand and why we don’t understand it. Amid a field of knowledge characterized by uncertainty and undertows, a wet ontology may be particularly well suited for situating our understanding of space, society, and our fluid environment.